

IN THE CLAIMS:

Please cancel claim 27 and amend claims 1, 3, 7, and 25 to read as follows:

1. (Currently Amended) In a device for sorting different materials, comprising a conveyor belt and at least one sensor which is assigned to the conveyor belt and senses pieces of material in a location-dependent manner on the conveyor belt, and at least one actuator which sorts out pieces of material in accordance with signals of the at least one sensor in a location-dependent manner,

the improvement comprising at least one electromagnetic actuator having at least one energizable coil rotatably suspended about a shaft, which performs a rotational movement, starting from a basic, first position in a gap between a pair of first oppositely magnetized permanent magnets, to a second position in a gap between a pair of second oppositely magnetized permanent magnets, wherein actuate the actuator energizable coil, which is negatively biased in toward the first position, is acted upon with a positive current pulse and, due to the differently oriented

magnetic fields of the pairs of the first and second magnets, it performs the rotational movement about the shaft, so that the rotational movement of the coil effects an actuating operation for sorting out a piece of material; and wherein the actuator further includes an ejector, operatively coupled to move with the energizable coil, to eject pieces of material when the energizable coil effects an actuating operation.

2. (Previously Presented) The sorting device according to claim 1, wherein the at least one electromagnetic actuator is arranged at a side of the conveyor belt.

3. (Currently Amended) The sorting device according to claim 1, wherein the at least one electromagnetic actuator is driven in a location-dependent manner so as to pivot an the ejector connected to the actuator into the transport path of the correspondingly sensed piece of material for sorting out the piece of material.

4. (Previously Presented) The sorting device according to claim 3, wherein the at least one electromagnetic actuator is arranged behind the end of the conveyor belt at an outlet

side, and wherein the ejector is pivotable into the flight path of the correspondingly sensed piece of material.

5. (Previously Presented) The sorting device according to claim 1, wherein windings of the coil extend in planes which are positioned substantially perpendicular to the shaft.

6. (Previously Presented) The sorting device according to claim 1, wherein the permanent magnets are made from neodymium-iron boron.

7. (Currently Amended) The sorting device according to claim 1, wherein the permanent magnets ~~{6}~~ are formed as ~~plate-like~~ plate-shaped ring segments.

8. (Previously Presented) The sorting device according to claim 7, wherein an inner radius and an outer radius of the ring segments have their origin at the shaft.

9. (Previously Presented) The sorting device according to claim 5, wherein the coil comprises two legs which are radially oriented relative to the shaft.

10. (Previously Presented) The sorting device according to claim 1, wherein the coil is held on a carrier which is

suspended from the shaft, the end of the carrier opposite to the coil forming an adjusting member.

11. (Previously Presented) The sorting device according to claim 1, wherein the respective permanent magnets are held both at the one side and at the other side of the gap on a respective base plate, the base plates forming parts of an exterior housing structure.

12. (Previously Presented) The sorting device according to claim 11, wherein a bearing in which the shaft is held is provided in each base plate.

13. (Previously Presented) The sorting device according to claim 11, wherein the coil is supplied with current by means of silicone-coated stranded wires.

14. (Previously Presented) The sorting device according to claim 12, wherein a respective stranded wire is arranged at each side of the carrier and connected to the housing structure.

15. (Previously Presented) The sorting device according to claim 11, wherein the base plates are spaced apart by a housing wall enclosing the coil and the permanent magnets.

16. (Previously Presented) The sorting device according to claim 1, wherein at least one further pair of third permanent magnets is provided of opposite polarity to the pair of second permanent magnets, with a gap therein-between, and a further coil is provided, said further coil being offset relative to the first coil such that it is positioned closer to the pair of third permanent magnets and is energized whenever a rotational movement takes place from the pair of second permanent magnets to the pair of third permanent magnets.

17. (Previously Presented) The sorting device according to claim 16, wherein the position of the coils between the respective pairs of permanent magnets is used for an actuating operation.

18. (Previously Presented) The sorting device according to claim 1, wherein the two pairs of permanent magnets cover a sector of about 90° .

19. (Previously Presented) The sorting device according to claim 16, wherein the three pairs of permanent magnets cover a sector of between 120° and 180° .
20. (Previously Presented) The sorting device according to claim 1, wherein in the basic position the coil is acted upon by a voltage and the polarity thereof is reversed for transfer from the first position into the second position.
21. (Previously Presented) The sorting device according to claim 20, wherein the coil is energized for a return movement from the second position into the first position.
22. (Previously Presented) The sorting device according to claim 13, wherein the respective stranded wire is laid in a loop having a length several times the direct connection path between a connection point at the coil and a connection point at the housing.
23. (Previously Presented) The sorting device according to claim 1, wherein a plurality of electromagnetic actuators are arranged side by side, forming a modular unit.

24. (Previously Presented) The sorting device according to claim 23, wherein the shafts of the individual electromagnetic actuators from which the coils are suspended are positioned along a line.

25. (Currently Amended) The sorting device according to claim 4 23, wherein the at least one sensor senses pieces of material in a location-dependent manner on the conveyor belt and, in accordance with signals of the sensor, corresponding actuators of a the modular unit arranged behind the end of the conveyor belt at the outlet side are driven in a location-dependent manner to pivot an the ejector ~~connected to the respective actuator~~ into the flight path of the correspondingly sensed piece of material.

26. and 27. (Canceled).